



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,538	09/26/2001	Guy Riddle	6533/53640	4598
30505	7590	02/10/2005	EXAMINER	
MARK J. SPOLYAR 38 FOUNTAIN ST. SAN FRANCISCO, CA 94114			WU, QING YUAN	
			ART UNIT	PAPER NUMBER
			2126	

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/966,538	Applicant(s) RIDDLE, GUY	
	Examiner Qing-Yuan Wu	Art Unit 2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-27 are pending in the application.
2. To insure proper consideration and to the extent required by 37 CFR 1.56, applicant is required to update the information hereby incorporated by reference (e.g. patent number of "Method for Automatically Classifying Traffic in a Packet Communications Network," see specification, pg. 1, line 29 and pg. 8, line 23).
3. It is noted that although the present application does contain line numbers in the specification and claims, the line numbers in the claims do not correspond to the preferred format. The preferred format is to number each line of every claim, with each claim beginning with line 1. For ease of reference by both the Examiner and Applicant all future correspondence should include the recommended line numbering.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 11-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 11-27 are directed to method steps which can be practiced mentally in conjunction with pen and paper, therefore they are directed to non-statutory subject matter. Specifically, as claimed, it is uncertain what performs each of the claimed method steps. The

claimed steps do not define a machine or computer implemented process [see MPEP 2106].

(The examiner suggests applicant to change “method” to “computer implemented method” in the preamble to overcome the outstanding 35 U.S.C. 101 rejection).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-9, 13, and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. The following terms lack antecedent basis:

i. The creating step (c)- claim 23, line 4.

b. The following claim language is indefinite:

i. As per claims 1 and 8, it is uncertain whether “the plurality”, refers to “a plurality of users”, or “a plurality of partition objects” (i.e. if they are the same then “said” or “the” should be used and “the plurality of partition objects” must be used throughout all the claims).

ii. As per claim 8, it is uncertain what “a second allocation” in line 24 means (i.e. allocating a second resource?).

- iii. As per claim 13, it is uncertain whether “a partition” refers to “a partition” in claim 11, line 4 (i.e. if they are the same then “said” or “the” should be used and “the partition” must be used throughout all the claims).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 10-11, 13-14, 17-19, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chawla et al. (hereafter Chawla) (U.S. Patent 6,771,661).

10. As to claim 10, Chawla teaches the invention substantially as claimed including dynamically allocate access to a network resource among a plurality of users [abstract, lines 3-5; col. 6, lines 35-36; col. 20, lines 25-26; Fig. 5], comprising:

a partition management module operative to dynamically create partitions [abstract, lines 1-5; col. 2, lines 52-67]; and,

a partitioning mechanism operative to enforce the partitions to control access to a network resource among a plurality of users [col. 2, lines 17-30].

11. Chawla does not specifically teach create partition in response to new users. However, Chawla disclosed create partition upon the occurrence of specific events [abstract, lines 3-4; col. 6, lines 62-63; col. 20, lines 46-47]. It would have been obvious to one of an ordinary skill in the art at the time the invention was made, to have recognized that the occurrence of specific events can include the addition or detection of new users which requires additional resources.

12. As to claim 11, this claim is rejected for the same reason as claim 10 above. In addition Chawla teaches recognizing a new user of a network resource, creating a partition on demand for the new user, wherein the partition is operable to allocate utilization of the network resource to the new user [col. 1, line 66 to col. 2, line 16; col. 6, lines 54-64; Fig. 5], and disposing of the partition when no longer needed [col. 3, lines 4-12].

13. As to claim 13, Chawla teaches the invention substantially as claimed including wherein receiving a set of parameters defining a partition [col. 3, lines 30-34, lines 54-58; Fig. 2].

14. As to claim 14, Chawla teaches the invention substantially as claimed including wherein the partition is configurable based on a characteristic of the user's utilization of the network resource [col. 3, lines 30-34, 54-58; col. 20, lines 21-26].

15. As to claim 17, Chawla does not specifically teach wherein the partition is implemented by class-based weighted fair queuing (hereafter CBWFQ) functionality. However, Chawla disclosed weighted fair queuing (hereafter WFQ) algorithm to dequeue data from various queues

Art Unit: 2126

[col. 5, lines 40-45], and different levels of service for different dataflow [col. 2, lines 24-30]. It would have been obvious to one of an ordinary skill in the art at the time the invention was made, to have extended the functionality of WFQ to provide support for user-defined traffic classes.

16. As to claim 18, Chawla does not specifically teach wherein the partition is implemented by committed access rate functionality (hereafter CAR). The functionality of rate limiting in bandwidth management is well known in the art, in addition, Chawla disclosed different levels of service for different dataflow [col. 2, lines 24-30].

17. As to claim 19, this claim is rejected for the same reason as claim 11 above.

18. As to claim 26, this claim is rejected for the same reason as claims 11, and 13 above. In addition, Chawla teaches associating a traffic classification to the data flow, wherein traffic classification determines the parameters of the partition, and enforcing the partition on the data flow [col. 2, lines 24-30].

19. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chawla as applied to claim 11 above, in view of Applicant Admitted Prior Art (hereafter AAPA).

20. As to claims 15-16, Chawla does not specifically teach wherein the partition is operable to provide a minimum allocation of the network resource to the new user, and limit utilization of

the network resource. However, Chawla disclosed bandwidth requirement for different data types [col. 2, lines 24-30; Fig. 5]. In addition, AAPA teaches partitions ensuring a minimum bandwidth and/or cap bandwidth as to a particular class of traffic [AAPA, pg. 4, lines 15-16]. It would have been obvious to one of an ordinary skill in the art at the time the invention was made, to have combined the teaching of Chawla with the teaching of AAPA because the teaching of Chawla improve the mechanism disclosed by AAPA [AAPA, pg. 5, lines 7-9] by automating (i.e. dynamic resource allocation) the manual mechanism perform by administrators.

21. Claims 1-9, 12, 20-22, 25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chawla as applied to claims 10, 11 and 19 above, in view of Eisler et al (hereafter Eisler) (U.S. Patent 6,128,713).

22. As to claim 12, Chawla does not specifically teach wherein the disposing step comprises the steps of reclaiming the partition for a subsequent new user if the partition is inactive. However, Chawla disclosed releasing reserved resource that are no longer required and allowing these resource to be used for transfer of other data [col. 3, lines 9-12]. In addition, Eisler teaches freeing up memory based on least recently used algorithm [Eisler, col. 4, lines 61-64; col. 14, lines 24-29]. It would have been obvious to one of an ordinary skill in the art at the time the invention was made, to have combined the teaching of Chawla with the teaching of Eisler because the teaching of Eisler allow efficiently reused of resources by reallocating least active used resource.

23. As to claim 20, this claim is rejected for the same reason as claims 11 and 12 above.

24. As to claim 21, this claim is rejected for the same reason as claim 20 above. In addition, Chawla as modified teaches reclaiming partition when necessary [Eisler, col. 14, lines 30-33].

25. As to claim 22, this claim is rejected for the same reason as claims 21 above.

26. As to claim 25, this claim is rejected for the same reason as claims 19 and 21 above. In addition Chawla as modified teaches a partition object space [col. 8, lines 51-53; 400, Fig. 6], monitoring use of the partitions [col. 7, lines 42-44; col. 8, lines 57-63].

27. As to claim 27, this claim is rejected for the same reason as claim 12 above.

28. As to claim 1, this claim is rejected for the same reason as claims 10-11, and 25 above. In addition, Chawla teaches at least one user partition object having at least one attribute defining an allocation of a network resource to a user [191, Fig. 2; Fig. 5; col. 3, lines 54-61]

29. As to claims 2-5, these are apparatus claims for performing the method claims 12 and 21. Therefore, they are rejected for the same reason as claims 12 and 21 above.

30. As to claims 6-7, these claim are rejected for the same reason as claim 1 above.

Art Unit: 2126

31. As to claims 8-9, these claims are rejected for the same reason as claims 1-2, and 6 above.

32. Claims 23-24, are rejected under 35 U.S.C. 103(a) as being unpatentable over Chawla, in view of Eisler as applied to claim 13 above, further in view of Gold et al (hereafter Gold) (U.S. PGPub 20020194326).


33. As to claim 23, this claim is rejected for the same reason as claim 13. In addition, Chawla as modified does not specifically teach receiving a partition cap parameter defining a desired limit on the number of user partitions; and wherein the creating step (c) is conditioned on the number of existing user partitions not exceeding the partition cap. However, Gold teaches preventing too many users from consuming a resource by limiting the number of user access [Gold, pg. 1, paragraph 8, lines 9-14; pg. 1, paragraph 9; pg. 3, paragraph 50, lines 4-14]. It would have been obvious to one of an ordinary skill in the art at the time the invention was made, to have combined the teaching of Chawla as modified with the teaching of Gold because the teaching of Gold guarantee that the number of users/requests will not exhaust the limited among of resources available.

34. As to claim 24, this claim is rejected for the same reason as claim 13. In addition, Chawla as further modified teaches defining an overflow partition; and assigning new users to the overflow partition, if the number of user partitions exceeds the partition cap [col. 5, lines 11-15; col. 6, lines 54-58].

35. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qing-Yuan Wu whose telephone number is (571) 272-3776. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


MENG-AI AN
SUPERVISORY EXAMINER
EBC CENTER 2100

Qing-Yuan Wu

Examiner

Art Unit 2127